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PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/B2004/052344

International filing date (day/month/year)
09.11.2004

Priority date (day/month/year)
27.11.2003

International Patent Classification (IPC) or both national classification and IPC
H04Q7/38

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/B2004/052344

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Concerning Section I,
Basis of the report

Reference is made to the following documents, which are cited in the International Search Report:

- D1: US 2003/144003 A1 (RANTA JUKKA ET AL) 31 July 2003 (2003-07-31)
- D2: US-B1-6 546 058 (GILHOUSEN KLEIN S ET AL) 8 April 2003 (2003-04-08)
- D3: US-B1-6 574 266 (HAARTSEN JACOBUS CORNELIS) 3 June 2003 (2003-06-03)
- D4: GB-A-2 336 070 (MOTOROLA LIMITED) 6 October 1999 (1999-10-06)
- D5: US-B1-6 415 146 (CAPECE CHRISTOPHER J) 2 July 2002 (2002-07-02)

Concerning Section V,
Reasoned statement with regard to novelty, inventive step or industrial applicability

- 1 The present application does not meet the requirements of the PCT, because the subject-matter of **Claims 1 and 7** does not involve an inventive step in the sense of Article 33(3) PCT.
 - 1.1 The prior art described in document D1, which is considered to represent the most relevant state of the art, is a method for a user equipment in peer to peer communication mode to perform cell handover (see D1, paragraph 12, claim 16), which comprises the steps of:
 - said user equipment detecting downlink signals of the active cell in which said user equipment is camping and its adjacent cells (see D1, paragraphs 12, 42), and
 - a network system deciding whether said user equipment and another user equipment in peer to peer communication can handover into a suitable cell to continue peer to peer communication (see D1, claim 16, paragraphs 4, 12, 23, 35).
 - 1.2 The claimed subject-matter therefore differs from this known method in that the user equipment judges whether there exists a suitable cell whose link performance is a predefined value higher than said of the active cell, and sends a detection report message to the network system to start a judging procedure which takes said

decision about handover.

- 1.3 Compared with this prior art the objectively determined problem underlying the application is to avoid repetitive switching between two cells.
- 1.4 No positive contribution to an inventive step can be seen in formulating this particular problem, because all claimed features missing in D1, i.e. the link performance in form of a bit error rate, the report message triggering the handover decision process in the network if the value of the candidate cell exceeds those of the active cell, the gating amount for hysteresis (see document D2, column 13, lines 56-58, 67, column 14, lines 20-23, 33-36), have already been employed for the same purpose (see document D2, column 14, lines 24-27) in a similar handover method.
- 1.5 So, it seems to be obvious to the person skilled in the art, namely when the same result is to be achieved, to apply these features with corresponding effect to the method according to document D1, and thus to arrive at the claimed solution.
- 2 For the same reason, the corresponding apparatus **Claims 14 and 16** do not involve the inventive step required by Article 33 (3) PCT.
- 3 The dependent **Claims 2-6, 8-13, 15, 17 and 18** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, the reasons therefore are that their features have already been employed for the same purpose in the prior art (**Claims 2, 3, 13**: see D2, column 13, lines 11-21, 56-59, **Claims 4, 9, 15, 17**: see D2, column 14, lines 16-20 in combination with D1, paragraphs 4, 7, 12, **Claim 5**: see for instance "GSM system for mobile communications" by Mouly M, Pautet M-B, Lassy-les-chateaux, Europe Media, fr, 1993, page 410, or any of the standardized mobile communication standards, **Claims 6, 10, 12**: see D2, column 13, line 65 - column 14, line 7, **Claims 8, 11, 18**: see D1, paragraph 27, see D5, figure 5, elements 220, 225, 235, 238, column 6, lines 24-29) or consist of slight constructional changes which come within the scope of the customary practice followed by persons skilled in the art.

- 4 As the claimed solution is already suggested by combinations of the documents D1 and D2, the alleged invention is industrially applicable in the sense of Article 33(4) PCT. The same applies to its embodiments as defined by the dependent claims.
- 5 Remarks concerning clarity of the international application:
- 5.1 The present formulation of **Claim 3** does not meet the requirements of Article 6 PCT, insofar as the feature "said decided candidate cells" lacks an antecedent basis.
- 5.2 The sentence "receiving a report message (...) to any UE" used in **Claim 13** seems not to be very comprehensibly and as such renders the scope of the claim unclear.
- 6 Remarks concerning formal defects in the international application:
- The opening part of the description should have been brought into conformity with the wording of the claims. This in particular concerns Claims 14 and 16.
 - In order to meet the requirements of Rule 5.1.(a),(ii) PCT, the documents D1, D2 and D5 should have been identified in the description and the relevant background art disclosed therein should have been briefly discussed.
 - The features of the claims should have been provided with reference signs placed in parentheses to increase the intelligibility of the claims (see Rule 6.2 (b) PCT). This applies to method and apparatus claims in as far as they refer to figure 4.
 - According to Rule 6.2 b) PCT, the features cited in the claims are supplied with reference signs in parenthesis where elements of the drawings are shown. However, the bracketed feature "user equipment" of **Claims 1 and 14** is no reference sign. Consequently, its abbreviation should be separated by another type of punctuation mark, a different type of brackets or should be omitted (cf. analogous Rule 11.13 l) und 11.13 m) PCT).
 - For clarity reasons each abbreviation (like e.g. P2P, UE in **Claims 1, 7, 14, 16**) appearing in the claims should be defined by its extended form (see e.g. page 1, line

18) in the first claim it is used.

- The general "spirit and scope" statement in the description at page 20, line 15 is unclear, and when used to interpret the claims renders them also unclear, contrary to Article 6 PCT. The statement should therefore have been deleted.

- At page 3, lines 9-19, page 4, lines 5, 9, page 5, lines 1-6, page 12, lines 10-14, page 13, line 4, page 17, line 15, the references to unpublished documents should have been replaced by issued patent or application numbers (or deleted), and the "*incorporated by reference*" statements should have been deleted, since the application should be self-contained and these documents clearly do not contain matter regarding essential features of the invention.

- The obvious minor errors in **Claims 3, 5, 7, 10, 13 and 15** should have been corrected.

- The attention of the Applicant is finally drawn to the fact that, when entering the national phase, the application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (see Articles of the national law corresponding to Article 34.2(b) PCT like e.g. Article 123(2) EPC).

- In order to facilitate the examination of the conformity of the amended application with the requirements of these Articles, the Applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).